# Volume 41 (1990) Author Index

# Δ

Adams, D. O., K. E. Franke, and L. P. Christensen. Elevated putrescine levels in grapevine leaves that display symptoms of potassium deficiency. 41:121-5.

Ambatlle-Espunyes, A. See M. C Vidal-Carou. 41:160-7.

An. D. See C. S. Ough. 41:68-73.

Andrews, J. T., H. Heymann, and M. Ellersieck. Sensory and chemical analyses of Missouri Seyval blanc wines. 41:116-20

Arnold, R. A., and A. M. Bledsoe. The effect of various leaf removal treatments on the aroma and flavor of Sauvignon blanc wine. 41:74-6.

Assemi, M. See J. L. Smilanick. 41:131-6.

### B

Barbas, J. I. See J. Mora. 41:156-9.

Barre, P. See M. Bely. 41:319-24.

Bartley, C. E. See C. G. Edwards. 41:48-56.

Bass, A. W. See K. Ophel. 41:325-9.

Bates, R. P. See C. A. Sims. 41:182-5, 273-6.

Beelman, R. B. See C. G. Edwards. 41:48-56.

Bely, M., J. M. Sablayrolles, and P. Barre. Description of the alcoholic fermentation kinetics: Its variability and significance. 41:319-24.

Ben-Tal, Y. Effects of gibberellin treatments on ripening and berry drop from Thompson Seedless grapes. 41:142-6.

Bhutani, V. P. See V. K. Joshi. 41:229-31.

Bianchi, M. See L. P. Christensen. 41:77-83.

Brillouet, J.-M., C. Bosso, and M. Moutounet. Isolation, purification, and characterization of an arabinogalactan from a red wine. 41:29-36.

Bisson, L. F. See L. S. Lagace. 41:147-55.

Blaise, A. See M. Goetghebeur. 41:295-300.

Bledsoe, A. M. See R. A. Arnold. 41:74-6. See J. T. English 41:137-41.

Boggero, J. See L. P. Christensen. 41:77-83.

Boone, C., A.-M. Sdicu, J. Wagner, R. Degré, C. Sanchez, and H. Bussey. Integration of the yeast K1 killer toxin gene into the genome of marked wine yeasts and its effect on vinfication. 41:37-42.

Borrull, F. See R. M. Marcé. 41:289-94.

Bosso, C. See J.-M. Brillouet. 41:29-36.

Botella, M. A., L. Perez-Rodriguez, B. Domecq, and V. Valpuesta. Amino acid content of fino and oloroso sherry wines. 41:12-15.

Boyle, T. A., and L. Hsu. Identification and quantitation of ellagic acid in muscadine grape juice. 41:43-7.

Brun, S. See M. Goetghebeur. 41:295-300.

Burns, G. See S. Fujinawa. 41:350-4.

Bussey, H. See C. Boone. 41:37-42.

# C

Cabezudo, M. D. See T. Herraiz. 41:313-18.

Calull, M. See R. M. Marcé. 41:289-94.

Chambers, K. R. Benzyl alcohol as an inhibitor of the development of *Botrytis cinerea in vitro* and in packed table grapes. 41:265-8.

Charpentier, C. See M. J. LeRoy. 41:21-8.

Charpentier, M. See M. J. LeRoy. 41:21-8.

Cheynier, V., J. Rigaud, J.-M. Souquet, F. Duprat, and M. Moutounet. Must browning in relation to the behavior of phenolic compounds during oxidation. 41:346-9.

Christensen, L. P., J. Boggero, and M. Bianchi. Comparative leaf tissue analysis of potassium deficiency and a disorder resembling potassium deficiency in Thompson Seedless grapevines. 41:77-83.
See J. T. Andrews. 41:116-20.

Cilliers, J. J. L., and V. L. Singleton. Research note. Nonenzymic autoxidative reactions of caffeic acid in wine. 41:84-6.

Cirami, R. M. See M. G. McCarthy 41:126-30.

Clary, C. D., R. E. Steinhauer, J. E. Frisinger, and T. E. Peffer. Evaluation of machine- vs. hand-harvested Chardonnay. 41:176-81.

Conradie, W. J. Distribution and translocation of nitrogen absorbed during late spring by two-year-old grapevines grown in sand culture. 41:241-50.

Cook, M. K. See T. K. Wolf. 41:330-41.

Correa-Gorospe, I. See R. Rodriguez-Clemente. 41:16-20.

Cottingham, C. K. See T. K. Wolf. 41:330-41.

Cox, D. J., and T. Henick-Kling. A comparison of lactic acid bacteria for energy-yielding (ATP) malolactic enzyme systems. 41:215-18.

# n

De Castro, J. J. See R. Rodriguez-Clemente. 41:16-20.

Degré, R. See C. Boone. 41:37-42.

de la Teja, P. See S. Fujinawa. 41:350-4.

Delgado, T., C. Gomez-Cordoves, and B. Villaroya. Relationships between phenolic compounds of low molecular weight as indicators of the aging conditions and quality of brandies. 41:342-5

Domecq, B. See M. A. Botella 41:12-15.

Duprat, F. See V. Cheynier. 41:346-9.

Duteurtre, B. See M. J. LeRoy. 41:21-8.

# E

Echavarri, J. F. See A. Negueruela. 41:232-40.

Edwards, C. G., R. B. Beelman, C. E. Bartley, and A. L. McConnell. Production of decanoic acid and other volatile compounds and the growth of yeast and malolactic bacteria during vinification. 41:48-56.

Ellersieck, M. See J. T. Andrews. 41:116-20.

English, J. T., A. M. Bledsoe, J. J. Marois, and W. M. Kliewer. Influence of grapevine canopy management on evaporative potential in the fruit zone. 41:137-41.

# F

Feuillat, M. See M. J. LeRoy. 41:21-8.

Flores, J. H., D. A. Heatherbell, and M. R. McDaniel. Ultrafiltration of wine: Effect of ultrafiltration on White Riesling and

# Volume 41 (1990) Author Index

# Δ

Adams, D. O., K. E. Franke, and L. P. Christensen. Elevated putrescine levels in grapevine leaves that display symptoms of potassium deficiency. 41:121-5.

Ambatlle-Espunyes, A. See M. C Vidal-Carou. 41:160-7.

An. D. See C. S. Ough. 41:68-73.

Andrews, J. T., H. Heymann, and M. Ellersieck. Sensory and chemical analyses of Missouri Seyval blanc wines. 41:116-20

Arnold, R. A., and A. M. Bledsoe. The effect of various leaf removal treatments on the aroma and flavor of Sauvignon blanc wine. 41:74-6.

Assemi, M. See J. L. Smilanick. 41:131-6.

### B

Barbas, J. I. See J. Mora. 41:156-9.

Barre, P. See M. Bely. 41:319-24.

Bartley, C. E. See C. G. Edwards. 41:48-56.

Bass, A. W. See K. Ophel. 41:325-9.

Bates, R. P. See C. A. Sims. 41:182-5, 273-6.

Beelman, R. B. See C. G. Edwards. 41:48-56.

Bely, M., J. M. Sablayrolles, and P. Barre. Description of the alcoholic fermentation kinetics: Its variability and significance. 41:319-24.

Ben-Tal, Y. Effects of gibberellin treatments on ripening and berry drop from Thompson Seedless grapes. 41:142-6.

Bhutani, V. P. See V. K. Joshi. 41:229-31.

Bianchi, M. See L. P. Christensen. 41:77-83.

Brillouet, J.-M., C. Bosso, and M. Moutounet. Isolation, purification, and characterization of an arabinogalactan from a red wine. 41:29-36.

Bisson, L. F. See L. S. Lagace. 41:147-55.

Blaise, A. See M. Goetghebeur. 41:295-300.

Bledsoe, A. M. See R. A. Arnold. 41:74-6. See J. T. English 41:137-41.

Boggero, J. See L. P. Christensen. 41:77-83.

Boone, C., A.-M. Sdicu, J. Wagner, R. Degré, C. Sanchez, and H. Bussey. Integration of the yeast K1 killer toxin gene into the genome of marked wine yeasts and its effect on vinfication. 41:37-42.

Borrull, F. See R. M. Marcé. 41:289-94.

Bosso, C. See J.-M. Brillouet. 41:29-36.

Botella, M. A., L. Perez-Rodriguez, B. Domecq, and V. Valpuesta. Amino acid content of fino and oloroso sherry wines. 41:12-15.

Boyle, T. A., and L. Hsu. Identification and quantitation of ellagic acid in muscadine grape juice. 41:43-7.

Brun, S. See M. Goetghebeur. 41:295-300.

Burns, G. See S. Fujinawa. 41:350-4.

Bussey, H. See C. Boone. 41:37-42.

# C

Cabezudo, M. D. See T. Herraiz. 41:313-18.

Calull, M. See R. M. Marcé. 41:289-94.

Chambers, K. R. Benzyl alcohol as an inhibitor of the development of *Botrytis cinerea in vitro* and in packed table grapes. 41:265-8.

Charpentier, C. See M. J. LeRoy. 41:21-8.

Charpentier, M. See M. J. LeRoy. 41:21-8.

Cheynier, V., J. Rigaud, J.-M. Souquet, F. Duprat, and M. Moutounet. Must browning in relation to the behavior of phenolic compounds during oxidation. 41:346-9.

Christensen, L. P., J. Boggero, and M. Bianchi. Comparative leaf tissue analysis of potassium deficiency and a disorder resembling potassium deficiency in Thompson Seedless grapevines. 41:77-83.
See J. T. Andrews. 41:116-20.

Cilliers, J. J. L., and V. L. Singleton. Research note. Nonenzymic autoxidative reactions of caffeic acid in wine. 41:84-6.

Cirami, R. M. See M. G. McCarthy 41:126-30.

Clary, C. D., R. E. Steinhauer, J. E. Frisinger, and T. E. Peffer. Evaluation of machine- vs. hand-harvested Chardonnay. 41:176-81.

Conradie, W. J. Distribution and translocation of nitrogen absorbed during late spring by two-year-old grapevines grown in sand culture. 41:241-50.

Cook, M. K. See T. K. Wolf. 41:330-41.

Correa-Gorospe, I. See R. Rodriguez-Clemente. 41:16-20.

Cottingham, C. K. See T. K. Wolf. 41:330-41.

Cox, D. J., and T. Henick-Kling. A comparison of lactic acid bacteria for energy-yielding (ATP) malolactic enzyme systems. 41:215-18.

# n

De Castro, J. J. See R. Rodriguez-Clemente. 41:16-20.

Degré, R. See C. Boone. 41:37-42.

de la Teja, P. See S. Fujinawa. 41:350-4.

Delgado, T., C. Gomez-Cordoves, and B. Villaroya. Relationships between phenolic compounds of low molecular weight as indicators of the aging conditions and quality of brandies. 41:342-5

Domecq, B. See M. A. Botella 41:12-15.

Duprat, F. See V. Cheynier. 41:346-9.

Duteurtre, B. See M. J. LeRoy. 41:21-8.

# E

Echavarri, J. F. See A. Negueruela. 41:232-40.

Edwards, C. G., R. B. Beelman, C. E. Bartley, and A. L. McConnell. Production of decanoic acid and other volatile compounds and the growth of yeast and malolactic bacteria during vinification. 41:48-56.

Ellersieck, M. See J. T. Andrews. 41:116-20.

English, J. T., A. M. Bledsoe, J. J. Marois, and W. M. Kliewer. Influence of grapevine canopy management on evaporative potential in the fruit zone. 41:137-41.

# F

Feuillat, M. See M. J. LeRoy. 41:21-8.

Flores, J. H., D. A. Heatherbell, and M. R. McDaniel. Ultrafiltration of wine: Effect of ultrafiltration on White Riesling and Gewürztraminer wine composition and stability. 41:207-14.

Fouse, D, C, See J. L. Smilanick. 41:131-6.

Franke, K. E. See D. O. Adams 41:121-5.

Frisinger, J. E. See C. D. Clary. 41:176-81.

Fujinawa, S., G. Burns, and P. de la Teja. Technical brief. Application of acid urease to reduction of urea in commercial wines. 41:350-4.

# G

Galzy, P. See M. Goetghebeur. 41:295-300.

Goetghebeur, M., M. Nicolas, A. Blaise, S. Brun, and P. Galzy. Wine benzyl alcohol oxidase: Isolation and characterization. 41:295-300.

Gomez-Cordoves, C. See T. Delgado. 41:342-5.

# н

Hamman, R. A. Jr., A. R. Renquist, and H. G. Hughes. Pruning effects on cold hardiness and water content during deacclimation of Merlot bud and cane tissues. 41:251-60.

Harris, C. M. See J. L. Smilanick. 41:131-6.

Hartsell, P. L. See J. L. Smilanick. 41:131-6.

Harvey, J. M. See J. L. Smilanick. 41:131-6.

Heatherbell, D. A. D. J. Cox. 41:215-18.

See J. H. Flores. 41:207-14.

Henick-Kling, T. See I.-M. Tegmo-Larsson. 41:189-92, 41:269-72.

Hensen, D. J. See J. L. Smilanick. 41:131-6.

Herraiz, T., G. Reglero, M. Herraiz, P. J. Martin-Alvarez, and M. D. Cabezudo. The influence of yeast and type of culture on the volatile composition of wines fermented without sulfur dioxide. 41:313-18.

Herraiz, M. See T. Herraiz, 41:313-18.

Heymann, H. 41:116-20.

Hooper, R. L. See P. D. Scudamore-Smith. 41:57-67.

Hsu, L. See T. A. Boyle. 41:43-7.

Huang, A. See C. S. Ough. 41:68-73.

Hughes, H. G. See R. A. Hamman, Jr. 41:251-60.

# IJK

lodi, M. See J. C. Morrison. 41:301-5.

James, D. See P. L. Monette. 41:201-3.

Jaworski, A. See C. Y. Lee. 41:87-9.

Johnson, R. P. See C. A. Sims. 41:182-5, 273-6.

Joshi, V. K., V. P. Bhutani, and R. C. Sharma. The effect of dilution and addition of nitrogen source on chemical, mineral, and sensory qualities of wild apricot wine. 41:229-31.

Kantz, K., and V. L. Singleton. Isolation and determination of polymeric polyphenols using Sephadex LH-20 and analysis of grape tissue extracts. 41:223-8.

Kliewer, W. M. See J. T. English 41:137-41.

See J. Perez. 41:168-75.

# L

Lagace, L. S., and L. F. Bisson. Survey of yeast acid proteases for effectiveness of wine haze reduction. 41:147-55.

Léauté, R. Distillation in alambic. 41:90-103.

Lee, C. Y., and A. W. Jaworski. Research note. Identification of some phenolics in white grapes. 41:87-9.
See J. Oszmianski. 41:204-6. LeRoy, M. J., M. Charpentier, B. Duteurtre, M. Feuillat, and C. Charpentier. Yeast autolysis during Champagne aging. 41:21-8.

Lima, J. L. F. C., and A. O. S. S. Rangel. Determination of metallic cations in wines by flow injection analysis. 41:284-8.

Los Arcos, M. L. See A. Negueruela. 41:232-40.

Lopez de Castro, M. P. See A. Negueruela. 41:232-40.

Loureiro, V. See M. Malfieto-Ferreira. 41:219-22.

# M

Magarey, P. A. See K. Ophel. 41:325-9.

Malfieto-Ferreira, M., J. P. Miller-Guerra, and V. Loureiro. Proton extrusion as indicator of the adaptive state of yeast starters for the continuous production of sparkling wines. 41:219-22.

Marcé, R. M., M. Calull, F. Borrull, and F. X. Rius. Determination of the major carboxyl acids in wine by an optimized HPLC method with linear gradient elution. 41:289-94.

Mariné-Font, A. See M. C. Vidal-Carou. 41:160-7.

Marois, J. J. See J. T. English 41:137-41.

Martin-Alvarez, P. J. See T. Herraiz. 41:313-18.

McCarthy, M. G., and R. M. Cirami. The effect of rootstocks on the performance of Chardonnay from a nematode-infested Barossa Valley vineyard. 41:126-30.

McConnell, A. L. See C. G. Edwards. 41:48-56.

McDaniel, M. R. See J. H. Flores, 41:207-14.

McLaren, E. D. See P. D. Scudamore-Smith. 41:57-67.

Miller-Guerra, J. P. See M. Malfieto-Ferreira. 41:219-22.

Monette, P. L., and D. James. The use of *Nicotiana benthamiana* as an herbaceous receptor host for closteroviruses from leafroll-affected vines. 41:201-3.

Mora, J., J. I. Barbas, and A. Mulet. Growth of yeast species during the fermentation of musts inoculated with Kluyveromyces thermotolerans and Saccharomyces cerevisiae. 41:156-9.

Morrison, J. C., and M. lodi. The influence of waterberry on the development and composition of Thompson Seedless grapes. 41:301-5.

\_\_\_\_\_, and A. C. Noble. The effects of leaf and cluster shading on the composition of Cabernet Sauvignon grapes and on fruit and wine sensory properties. 41:193-200.

See M. W. Silacci. 41:111-15.

Motomura, Y. Distribution of <sup>14</sup>C-assimilates from individual leaves into clusters and grape shoots. 41:306-12.

Moutounet, M. See J.-M. Brillouet. 41:29-36. See V. Cheynier. 41:346-9.

Mulet, A. See J. Mora. 41:156-9.

# N

Negueruela, A. I., J. F. Echavarri, M. L. Los Arcos, and M. P. Lopez de Castro. Study of color of quaternary mixtures of wines by means of the Sheffé design. 41:232-40.

Nicholas, P. R. See K. Ophel. 41:325-9.

Nicolas, M. See M. Goetghebeur. 41:295-300.

Noble, A. C. See J. C. Morrison. 41:193-200.

# OPQ

Ophel, K., P. R. Nicholas, P. A. Magarey, and A. W. Bass. Hot water treatment of dormant grape cuttings reduces crown

- gall incidence in a field nursery. 41:325-9.
- Oszmianski, J., and C. Y. Lee. Isolation and HPLC determination of phenolic compounds in red grapes. 41:204-6.
- Ough, C. S., D. Stevens, T. Sendovski, A. Huang, and D. An. Factors contributing to urea formation in commercially fermented wines. 41:68-73.
- Perez, J., and W. M. Kliewer. Effect of shading on bud necrosis and bud fruitfulness of Thompson Seedless grapevines.
- Perez-Rodriguez, L. See M. A. Botella. 41:12-15.

- Radler, F. Possible use of Nisin in winemaking, I. Action of Nisin against lactic acid bacteria and wine yeasts in solid and liquid media. 41:1-6.
- Possible use of Nisin in winemaking. II. Experiment to control lactic acid bacteria in the production of wine. 41:7-
- Rangel, A. O. S. S. See J. L. F. C. Lima. 41:284-8.
- Reglero, G. See T. Herraiz. 41:313-18.
- Rius, F. X. See R. M. Marcé. 41:289-94.
- Renguist, A. R. See R. A. Hamman, Jr. 41:251-60.
- Rodriguez-Clemente, R., I. Correa-Gorospe, and J. J. De Castro. A new method for the stabilization of wines with respect to the potassium bitartrate precipitation. 41:16-20.
- Rigaud, J. See V. Cheynier. 41:346-9.

- Sablayrolles, J. M. See M. Bely. 41:319-24.
- Sanchez, C. See C. Boone. 41:37-42.
- Scudamore-Smith, P. D., R. L. Hooper, and E. D. McLaren. Color and phenolic changes of Cabernet Sauvignon wine made by simultaneous yeast/bacterial fermentation and extended pomace contact. 41:57-67.
- Sdicu, A.-M. See C. Boone, 41:37-42.
- Sefton, M. A. See P. Winterhalter. 41:277-83.
- Sendovski, T. See C. S. Ough. 41:68-73.
- Sharma, R. C. See V. K. Joshi. 41:229-31.
- Silacci, M. W., and J. C. Morrison. Changes in pectin content of Cabernet Sauvignon grape berries during maturation. 41:111-15.
- Sims, C. A., R. P. Bates, and R. P. Johnson. Research note.

- Comparison of pre- and post-fermentation ultrafiltration on the characteristics of sulfited and non-sulfited white wines. 41:182-5.
- Effects of mechanical and pruning on the yield and quality of muscadine grapes. 41:273-6.
- Singleton, V. L. See K. Kantz. 41:223-8. See J. J. L. Cilliers, 41:84-6.
- Smilanick, J. L., J. M. Harvey, P. L. Hartsell, D. J. Hensen, C. M. Harris, D. C. Fouse, and M. Assemi. Factors influencing sulfite residues in table grapes after sulfur dioxide fumigation. 41:131-6.
- Souguet, J.-M. See V. Cheynier. 41:346-9.
- Steinhauer, R. E. See C. D. Clarv. 41:176-81
- Stevens, D. See C. S. Ough. 41:68-73.
- Stevens, D. See C. S. Ough. 41:68-73.

- Tegmo-Larsson, I.-M., and T. Henick-Kling. Ethyl carbamate precursors in grape juice and the efficiency of acid urease on their removal. 41:189-92.
  - The effect of fermentation and extended lees contact on ethyl carbamate formation in New York wine. 41:269-72.

- Ulla-Ulla, M. C. See M. C. Vidal-Carou. 41:160-7.
- Valpuesta, V. See M. A. Botella. 41:12-15.
- Vidal-Carou, M. C., A. Ambatlle-Espunyes, M. C. Ulla-Ulla, and A. Mariné-Font. Histamine and tyramine in Spanish wines: their formation during the winemaking process. 41:160-7.
- Villaroya, B. See T. Delgado. 41:342-5.

- Wagner, J. See C. Boone. 41:37-42.
- Williams, P. J. See P. Winterhalter. 41:277-83.
- Winterhalter, P., M. A. Sefton, and P. J. Williams. Volatile C13norisoprenoid compounds in Riesling wine are generated from multiple precursors. 41:277-83.
- Wolf, T. K., B. W. Zoecklein, M. K. Cook, and C. K. Cottingham. Shoot topping and ethephon effects on White Riesling grapes and grapevines. 41:330-41.

urease, for removal of ethyl carbamate precursors.

Aging. assessment of bottle-aging potential. 41:277-83.

Zoecklein, B. W. See T. K. Wolf. 41:330-41.

# Volume 41 (1990) Subject Index

- Acid(s). See also specific acid.
  - amino. See Amino acid.
  - caffeic. autoxidative reactions of in wine. 41:84-6.
  - caftaric. autoxidative reactions of in wine. 41:84-6.
  - carboxvlic. 41:289-94.
  - chlorogenic acid. 41:84-6.
  - decanoic. production during vinification. 41:48-56.
  - ellagic. identification and quantification. 41:43-7.
  - gallic. in muscadine juice. 41:43-7. hydroxycinnamic. 41:346-9.
- Aglycons. 41:277-83. Agrobacterium tumefaciens. 41:325-9.
- Alambic distillation, 41:90-103.

brandy. 41:342-5.

oak. 41:342-5.

41:189-92, 350-4.

Champagne. 41:21-8.

Alcoholic fermentation. See also Fermentation.

kinetics. 41:319-24.

Alpha-amino nitrogen. factor in urea accumulation. 41:58-73.

Amine(s), in Thompson Seedless wines, 41:77-83, 121-5. biogenic. formation during winemaking. 41:160-7.

Amino acid(s). in sherry wines. 41:12-15.

Ammonium. in leaf tissue of Thompson Seedless vines. 41:77-

Analysis. of grape tissue extracts. 41:223-8.

of metallic cations. 41:284-8.

of phenolics in red grapes. 41:204-6.

of phenolics in white grapes. 41:87-9.

of polymeric polyphenols. 41:223-8.

of vitispirane precursors. 41:277-83.

of wine sensory qualities. 41:74-6,116-20.

Apricot wine, 41:229-31.

Arabinogalactan, isolation, purification, and characterization of from a red wine. 41:29-36.

Aroma, wine. Missouri Seyval blanc sensory and chemical analysis. 41:116-20.

Sauvignon blanc leaf removal effects on. 41:74-6.

Autolysis, yeast. in Champagne aging. 41:121-8.

Autoxidation in wine. 41:84-6.

Bentonite, alternatives to in wine haze reduction, 41:147-55.

Benzyl alcohol. Botrytis cinerea inhibition by. 41:265-8.

Benzyl alcohol oxidase. 41:295-300.

Berry, grape. See also Grape.

drop, gibberellin treatments effects on. 41:142-6. enlargement. gibberellin treatments effects on. 41:142-6. gibberellin effects on. 41:142-6. pectin content changes in during maturation. 41:111-15.

ripening. See also Ripening.

delay in. 41:142-6.

pectin content changes during. 41:111-15. shading effects on. 41:193-200.

Biogenic amines, formation of during winemaking, 41:160-7.

Bitter almond taste in wine. 14C-assimilates. 41:306-12.295-300.

Blending, wine. color study of blends by Sheffé design. 41:232-

Bottle aging, potential assessment. 41:277-83.

Botrytis cinerea. benzyl alcohol inhibition of during grape storage. 41:265-8.

control of by canopy management to increase evaporative potential. 41:137-41.

control of by sulfur dioxide fumigation of table grapes. 41:131-6.

Brandy, alambic distillation, 41:90-103.

Browning, must. 41:346-9.

wine. caffeic acid effects on. 41:84-6.

Bud, grapevine. See also Grapevine. fruitfulness. shading effects on. 41:138-75. necrosis. shading effects on. 41:168-75.

Bunch rot. See Botrytis cinerea.

14C-assimilates. 41:306-12.

C,3-norisoprenoid compounds. 41:277-83.

Cabernet Sauvignon grapevines. See also Grapevine(s). pectin contact changes in berries. 41:111-15.

shading effects on fruit sensory properties. 41:193-200.

Cabernet Sauvignon wine. color changes during fermentation and pomace contact. 41:57-67.

leaf and cluster shading effects on sensory qualities. 41:193-200.

phenolic changes during fermentation and pomace contact. 41:57-67.

Caffeic acid, autoxidative reactions of in wine, 41:84-6

Caftaric acid. autoxidative reactions in wine. 41:84-6.

Canopy management. Botrytis cinerea control. 41:137-41.

bud necrosis control. 41:168-75.

Cabernet Sauvignon, shading effects on wine sensory qualities. 41:193-200.

evaporative potential in fruit zone, 41:137-41.

fruitfulness. effects on. 41:168-75.

muscadine. mechanical pruning. 41:273-6.

Riesling vines. 41:330-41.

Sauvignon blanc vines. 41:74-6.

shoot tipping and ethephon treatments effects on Riesling. 41:330-47.

Carbohydrate(s). colloids in wine. 41:29-36.

Carbon dioxide production rate in alcoholic fermentation. 41:319-24.

Carboxylic acids in wine. 41:289-94.

Catechin-gallates in white grapes. 41:87-9.

Cava. 41:16-20.

Champagne. stabilization. 41:16-20.

yeast autolysis during aging. 41:21-8. Chardonnay grapevines, harvesting techniques, 41:176-81.

rootstock effects on nematode resistance. 41:156-30.

Chemiosmotic energy. 41:215-18.

Chlorogenic acid. 41:84-6.

Chromatography. affinity. grape polysaccharide identification. 41:29-36.

droplet counter-current (DCCC). vitispirane precursor analysis. 41:277-83.

gel permeation. polysaccharide purification. 41:29-36.

high performance liquid. caffeic acid determination in wine. 41:84-6.

carboxylic acids determinations in wine. 41:289-94. ellagic acid identification and quantification. 41:43-

phenolic acid and aldehyde concentrations. 41:342-

phenolic compounds determination in red grapes. 41:204-6.

polymeric polyphenols isolation and determination. 41:223-8.

ion exchange, grape polysaccharides purification. 41:29-

Closteroviruses, 41:201-3.

Cluster shading effects on Cabernet Sauvignon fruit and wine sensory qualities. 41:193-200.

Cognac. alambic distillation. 41:90-103.

Cold hardiness, grapevine. pruning effects on Vitis vinifera. 41:251-60.

Color, wine. changes during simultaneous yeast/bacterial fermentation and extended pomace contact. 41:57-67.

Missouri Seyval blanc. 41:116-20.

Sheffé design to describe color response. 41:232-40. ultrafiltration effects on. 41:182-5.

Crossflow filtration. 41:182-5.

Crown gall control. 41:235-9.

Cuvaison. 41:57-67.

### D

Deacclimation, Vitis vinifera. pruning effects on cold hardiness and water content. 41:251-60.

Decanoic acid production during vinification. 41:48-56.

Descriptive sensory analysis. of Missouri Seyval blanc wines. 41:116-20.

of Sauvignon blanc wines. 41:74-6.

of Seyval blanc wines. 41:116-20.

Dessèshement de la raffle. 41:301-5.

Disease, grapevine. See also specific disease.

Botrytis cinerea. 41:137-41.

14C-assimilates. 41:306-12.

crown gall. 325-9.

leafroll. 41:201-3.

virus. 41:201-3.

Distillation, alambic. 41:90-103.

Distribution. of <sup>14</sup>C-assimilates. 41:306-12. of nitrogen in grapevines. 41:241-50.

Droplet counter-current chromatography (DCCC). See Chromatography.

### Е

Electron microscopy. virus identification. 41:201-3.

Ellagic acid. identification and quantification in muscadine juice. 41:43-7.

Enzymatic hydrolysis. arabinogalactan. 41:29-36.

Enzyme(s). malolactic systems. 41:215-18.

inhibition. 41:295-300.

purification. 41:295-300.

Ethephon treatment of Riesling vines. 41:330-41.

Ethyl carbamate. factors contributing to urea formation. 41:68-73, 350-4.

fermentation and extended lees contact effects on forma-

tion. 41:269-72. precursors in grape juice. 41:189-92.

urea reduction. 41:350-4.

Evaporation potential in fruit zone of grapevine canopy. 41:167-

# F

False potassium. 41:77-83.

Fermentation, alcoholic, biogenic amine formation. 41:160-7. kinetic. 41:319-24.

commercial. urea formation in wine. 41:68-73.

ethyl carbamate formation during. 41:68-73, 189-92, 269-72.

histamine formation. 41:160-7.

malolactic. See also Malolactic fermentation.

biogenic amines formation. 41:160-7.

lactic acid bacteria comparisons for energy yielding (ATP) malolactic enzyme systems. 41:215-18.

simultaneous yeast/bacterial. 41:57-67.

tyramine formation, 41:160-7.

without sulfur dioxide. 41:313-18.

Fino sherry acid content. 41:12-15.

Flavor, wine. bitter almond taste. 41:295-300.

Missouri Seyval blanc sensory and chemical analysis. 41:116-20.

precursors. 41:277-83.

Flow injection analysis of metallic actions in wine. 41:284-8.

Fruit rot. 41:330-41.

Fumigation. sulfur dioxide on table grapes. 41:131-6.

### G

Genomic integration of yeast K1 killer toxin gene. 41:37-42.

Gewürztraminer wine. ultrafiltration effects on composition and stability. 41:207-14.

Gibberellin. effects of ripening and berry drop in Thompson Seedless. 41:142-6.

Glutathione, 41:346-9.

Glycoconjugates. 41:277-83.

Grape(s). arabino-3,6-galactan. 41:29-36.

berry. See also Berry.

drop. 41:142-6.

enlargement. 41:142-6.

mechanical pruning effects on yield and quality of muscadine. 41:273-6.

pectin content changes in during maturation. 41:111-15.

composition. leaf and cluster shading effects on. 41:193-200.

phenolics identification. 41:87-9, 204-6.

polysaccharides. 41:29-36.

Sauvignon blanc. leaf removal treatments. 41:74-6.

shading effects on bud necrosis and fruitfulness. 41:168-75.

storage. benzyl alcohol use for *Botrytis cinerea* inhibition. 41:265-8.

sulfur dioxide fumigation of table grapes. 41:131-6.

shoots. 14C-assimilate distribution. 41:306-12.

table. See also Table grapes.

storage. 41:131-6.

tissue extract analysis. 41:223-8.

variety tissue analysis. 41:223-8.

waterberry. 41:301-5.

white. phenolics. 41:87-9.

Grapevine(s). See also specific varieties.

bud necrosis and fruitfulness. 41:168-75.

tissue response to low temperature exotherm. 41:251-60.

<sup>14</sup>C-assimilate distribution. 41:306-12.

Cabernet Sauvignon. leaf and cluster shading effects on fruit and wine sensory qualities. 41:193-200.

pectin content of berries during maturation. 41:111-15.

cane tissue responses to low temperature exotherm. 41:251-60.

canopy management. effect on fruit and wine sensory qualities. 41:193-200.

evaporative potential in fruit zone. 41:137-41.

Sauvignon blanc vines. 41:74-6.

shading effects on bud necrosis and fruitfulness. 41:168-75.

Chardonnay. harvesting techniques. 41:176-81.

rootstock effects on performance in nematode-infected vineyard. 41:126-30.

cluster shading. 41:193-200.

cold hardiness. pruning effects on. 41:251-60.

crown gall. 41:325-9.

disease. See Disease.

ethephon treatments. 41:330-41.

false potassium. 41:77-83.

gibberellin treatments. 41:142-6. harvesting techniques. 41:176-81. leaf removal treatments. 41:74-6. leaf shading effects. 41:193-200.

Merlot. pruning effects on cold hardiness and water content. 41:251-60

mineral nutrition. 41:77-83,241-50.

muscadine. mechanical pruning. 41:273-6.

nematode resistance. 41:126-30.

nitrogen distribution and translocation. 41:241-50.

pruning, effects on cold hardiness of Merlot cane and bud tissues. 41:251-60.

mechanical on muscadine. 41:273-6.

potassium deficiency. 41:77-83, 121-5.

putrecine levels. 41:121-5.

Riesling, shoot tipping and ethephon treatment. 41:330-

Thompson Seedless. bud necrosis and bud fruitfulness. 41:168-75.

gibberellin treatment of. 41:142-6.

potassium deficiency. 41:77-83, 121-5.

virus. Nicotiana benthamiana as receptor host. 41:201-3. Vitis vinifera. pruning effects on cold hardiness and water content. 41:241-60.

### H

Harvesting techniques. hand- vs. machine harvesting of Chardonnay. 41:176-81.

Haze, wine. yeast acid proteases for reduction. 41:147-55.

Hedging. Riesling vines. 41:330-41.

Herbaceous receptor host for closteroviruses from leafroll-infected vines. 41:201-3.

High performance liquid chromatography. See Chromatography.

Histamine formation during winemaking. 41:160-7.

Hot water treatment for crown gall. 41:325-9.

HPLC. See Chromatography.

Hydroxycinnamic acids. 41:346-9.

# 1

Identification. of arabinogalactan. 41:29-36. of catechin-gallates in white grapes. 41:87-9. of ellagic acid. 41:43-7. of phenolics in red grapes. 41:223-8. of phenolics in white grapes. 41:87-9. virus. 41:201-3.

Immunosorbent electron microscopy (ISEM) for virus identification. 41:201-3.

Inhibitor(s). of KHT precipitation. 41:16-20.

Inoculation. of *Kluyveromyces thermotolerans* to must. 41:156-9.

of Saccharomyces cerevisiae to must. 41:156-9.

Insoluble grape solids. effects on decanoic acid production during vinification. 41:48-56.

effects on malolactic bacteria during vinification. 41:48-

56.

ISEM. See Immunosorbent electron microscopy.

Isolation. of phenolic compounds in red grapes. 41:204-6. of phenolic compound in white grapes. 41:87-9.

# JK

Juice, grape. ellagic acid in. 41:43-7. ethyl carbamate precursors in. 41:269-72. muscadine, 41:43-7.

K1 killer toxin gene. 41:37-42.

K1/K2 double killer strains. 41:37-42.

Kinetic description of alcoholic fermentation. 41:319-24.

Kloeckera apiculata for wine haze reduction. 41:147-55. influence on volatile composition of wine fermented without sulfur dioxide. 41:313-18.

Kluyveromyces thermotolerans. yeast strains growth during fermentation of musts inoculated with. 41:156-9.

### L

Lactic acid bacteria. comparison of for energy-yielding (ATP) malolactic enzyme systems. 41:215-18. control of in winemaking. 41:7-11. Nisin sensitivity. 41:1-6, 7-11.

Lactobacillus. Nisin sensitivity. 41:1-6, 7-11.

Leaf, grapevine. removal effects on Sauvignon blanc wine sensory qualities. 41:74-6. shading effects on Cabernet Sauvignon fruit and wine sensory properties. 41:193-200. tissue analysis. 41:77-83, 121-5.

Leafroll. 41:201-3.

Leuconostoc oenos. insoluble grape solids influence on fermentation. 41:48-56.

Nisin sensitivity. 41:1-6, 7-11.

Light intensity effects on bud necrosis and bud fruitfulness of Thompson Seedless. 41:168-75.

Low temperature exotherm. responses of bud and cane tissues of *Vitis vinifera*. 41:251-60.

# M

Malate catabolism, 41:215-18.

Malolactic bacteria. growth during vinification. 41:43-56.

Malolactic fermentation. biogenic amine formation during. 41:160-7.
Cabernet Sauvignon wines. 41:57-67.
color and phenolic changes. 41:57-67.

decanoic acid production. 41:48-56.

energy-yielding (ATP) enzyme systems. 41:215-18. Nisin effects on. 41:1-6, 7-11.

Mechanical harvesting. See also Harvesting. of Chardonnay. 41:176-81.

Mechanical pruning of muscadine. 41:273-6.

Merlot grapevines. pruning effects on cold hardiness and water content during deacclimation of cane and bud tissue. 41:251-60.

Metallic cations in wine. 41:284-8.

Microclimate, grapevine, See also Canopy management.

Botrytis cinerea control. 41:137-41.

evaporative potential in the fruit zone. 41:137-41.

leaf and cluster shading of Cabernet Sauvignon. 41:193-200.

shading effects on bud necrosis and fruitfulness. 41:168-75.

Microvinification. color and phenolic changes in Cabernet Sauvignon wine. 41:57-67.

genomic integration of yeast K1 killer toxin into wine yeasts. 41:37-42.

Mineral composition of apricot wine. 41:229-31.

Mineral nutrition, grapevines. nitrogen distribution and translocation. 41:241-50.

Thompson Seedless. 41:77-84, 121-5.

Muscadine grapevines, pruning effects on yield and quality. 41:273-6.

Must oxidation, 41:346-9.

Necrosis, shading effects on in Thompson Seedless. 41:168-75. Nematode-resistant rootstock. 41:126-30.

Nicotiana benthamiana as herbaceous receptor host for closteroviruses from leafroll-affected grapevines. 41:201-3.

Nitrogen, distribution in vine. 41:241-850. in leaf tissue of Thompson Seedless. 41:77-83. spring-applied. 41:241-50. translocation. 41:241-50.

Oloroso sherry acid content. 41:12-15.

Oxidation. must. 41:346-9. wine, of caffeic acid. 41:84-6.

Pectin content of maturing Cabernet Sauvignon berries. 41:111-

Pediococcus. sensitivity to Nisin. 41:1-6, 7-11.

Phenolic(s), acids and aldehydes in brandies, 41:342-5.

behavior during must oxidation. 41:346-9.

changes in Cabernet Sauvignon wines made by simultaneous yeast/bacterial fermentation and pomace contact. 41:57-67.

identification in red grapes. 41:204-6. in white grapes. 41:87-9.

Phloem transport. 41:301-5.

Phyllotaxis. 41:306-12.

Polyamines in grapevine leaves. 41:77-83, 121-5.

Polymeric phenols in grape tissue extracts. 41:223-8.

Polyphenols in grape tissue extracts. 41:223-8.

Polysaccharides in red wine. 41:29-36.

Pomace contact effects on color and phenolics in Cabernet Sauvignon wine. 41:57-67.

Potassium. bitartrate. inhibitors in wine. 41:16-20. precipitation in wine stabilization. 41:16-20. deficiency. in Thompson Seedless vines. 41:77-83, 121false. 41:77-83.

Precipitation. potassium bitartrate. 41:16-20.

Precursors of ethyl carbamate. 41:68/-73, 189-92, 269-72.

Proline content in sherry. 41:12-15.

Propagation material, crown gall control in. 41:235-9.

Proteases, yeast acid. effectiveness in wine haze reduction. 41:147-55.

Protein stability. haze formation in wine. 41:147-55.

Proton extrusion as an indicator of adaptive state if yeast starters for continuous sparkling wine production. 41:219-22.

Pruning effects on cold hardiness of Merlot. 41:251-60. effects on yield and quality of muscadine. 41:273-6.

Putrecine in grapevines displaying symptoms of potassium deficiency. 41:77-83, 121-5.

Red wine. See Wine.

Reserve nitrogen, grapevine. See Nitrogen.

Riesling grapevines. shoot tipping and ethephon treatment. 41:330-41.

Riesling wine. C<sub>13</sub>-norisoprenoid compounds in. 41:277-83.

Ripening, grape, berry pectin content changes during. 41:111-

delay. 41:142-6.

gibberellin treatments. 41:142-6.

shading effects on Cabernet Sauvignon. 41:193-200. waterberry effects on. 41:301-5.

Rootstock(s). Chardonnay performance. 41:126-30. crown gall control. 41:325-9.

nematode resistance. 41:126-30. non-vinifera, 41:126-30.

Saccharomyces cerevisiae. Champagne aging. 41:21-9. growth of yeast species during fermentation of musts inoculated with. 41:156-9.

influence on volatile composition of wines fermented without sulfur dioxide. 41:313-18.

insoluble grape solids influence on fermentation. 41:57-

Sauvignon blanc wines, leaf removal treatments effects on aroma and flavor. 41:74-6.

Sensory, analysis of wine. Missouri Seyval blanc. 41:116-20. properties of Cabernet Sauvignon fruit and wine, shading effects on. 41:193-200.

quality. nitrogen source effect on apricot wine. 41:229-31. ultrafiltration effects on. 41:182-5. vine leaf removal effects on. 41:74-6.

Seyval blanc wine, sensory and chemical analysis, 41:116-20.

Shading, effects on bud necrosis and fruitfulness, 41:168-75. effects on Cabernet Sauvignon sensory qualities, 41:193-

Sheffé design for color specification of wines. 41:232-40.

Sherry, acid content, 41:12-15.

Shoot positioning and thinning effect of bud necrosis and fruitfulness. 41:168-75.

Simplex method. 41:289-94.

Simultaneous distillation extraction. 41:277-83.

Simultaneous yeast/bacterial fermentation of Cabernet Sauvignon. 41:57-67.

Softening, grape berry. 41:111-15.

Sparkling wine. adaptive state of yeast starters for continuous production. 41:219-22. stabilization. 41:16-20. yeast autolysis during aging. 41:21-8.

Spring-applied nitrogen. 41:241-50.

Stable killer phenotype. 41:37-42.

Stabilization, wine. Champagne. 41:16-20. KHT precipitation. 41:16-20.

Stiellähme. 41:301-5.

Sulfur dioxide. sulfite residues in table grapes after fumigation. 41:131-6.

Table grapes. sulfite residues. 41:131-6.

Tannin. ellagitannin in muscadine juice. 41:43-7. in grape tissue extracts. 41:223-8.

Thermal analysis of deep supercooling of Vitis vinifera dormant bud and cane tissue. 41:251-60.

Thompson Seedless grapevines, berry drop. 41:142-6. bud fruitfulness. 41:168-75. bud necrosis. 41:168-75. gibberellin treatments. 41:142-6. leaf tissue analysis. 41:77-83, 121-5. potassium deficiency. 41:77-83, 121-5. ripening. 41:142-6. waterberry. 41:301-5.

Torulaspora delbrueckii influence on volatile composition of wines fermented without sulfur dioxide. 41:313-18.

Translocation of nitrogen in vines. 41:541-50.

Trellising. See also Canopy management.

for increased evaporative potential in the fruit zone. 41:137-41.

leaf and cluster shading effects on Cabernet Sauvignon fruit and wine sensory qualities. 41:193-200.

1,1,6-Trimethyl-1,2-dihydronaphthalene (TDN). 41:277-83.

Tyramine formation during winemaking. 41:160-7.

Ultrafiltration. 41:182-5, 207-14.

Urea, formation in commercially fermented wines, 41:68-73. in grape juice. 41:189-92. reduction by acid urease. 41:350-4.

Variability of alcoholic fermentation kinetics. 41:319-24.

Vineyard, nematode resistance, 41:126-30. replant. 41:126-30.

Vinification. decanoic acid production during. 41:48-56. genomic integration of yeast K1 killer toxin into wine yeasts. 41:37-42. volatile compound production during. 41:48-56. yeast growth during. 41:48-56.

Virus, closteroviruses from leafroll-affected vines, 41:201-3.

Vitaspiranes. precursors in Riesling wine. 41:277-83.

Vitis rotundifolia, mechanical pruning, 41:273-6.

Vitis vinifera. pruning effects on cold hardiness and water content. 41:251-6.

Volatile compound production during vinification. 41:48-56. yeast influence on. 41:313-18.

Water content of bud and cane tissue. 41:251-60.

Waterberry, 41:301-5.

White grapes. See Grapes.

White Riesling wine ultrafiltration. 41:207-14.

Wine(s). acid content of sherries. 41:12-15.

apricot. 41:229-31.

aroma. leaf removal effects on. 41:74-6.

Missouri Seyval blanc sensory and chemical analyses. 41:116-20.

autoxidative reaction of caffeic acid in. 41:84-6.

benzyl alcohol oxidase isolation and characterization. 41:295-300.

biogenic amines formation. 41:160-7.

blending. 41:232-40. browning. 41:84-6.

Cabernet Sauvignon color and phenolic changes. 41:57-

shading effects on sensory properties. 41:193-200. caffeic acid in. 41:84-6.

carbohydrate colloids, 41:29-36.

Champagne. aging. 41:21-8.

color, changes during simultaneous yeast/bacterial fermentation and pomace contact. 41:57-67.

Missouri Seyval blanc. 41:116-20.

Sheffé design. 41:232-40.

ultrafiltration effects on. 41:182-5.

ethyl carbamate. 41:58-73, 189-92, 269-72.

Euvitis. ultrafiltration. 41:182-5.

fermentation without sulfur dioxide. 41:313-18.

flavor. See also Flavor and Sensory

Missouri Seyval blanc. 41:116-20.

Sauvignon blanc. 41:74-6.

precursors. 41:272-83. Gewürztraminer, ultrafiltration, 41:207-14.

haze reduction. 41:147-55.

histamine formation. 41:160-7.

insoluble solids effects on sensory qualities. 41:48-56. mechanical pruning effects on quality. 41:273-6.

metallic cation determination by flow injection analysis. 41:284-8.

muscadine, 41:273-6.

Nisin use to control lactic acid bacteria, 41:7-11.

polysaccharides, 41:29-36.

potassium bitartrate precipitation. 41:16-20.

protein. wine haze reduction. 41:147-55.

Riesling. C<sub>13</sub>-norisoprenoid compounds. 41:277-83. Sauvignon blanc. effects of vine leaf removal treatments on aroma and flavor. 41:74-6.

sensory analysis. See also Descriptive sensory analysis. insoluble solids effects on. 41:48-56.

leaf removal treatments effects on. 41:74-6.

mechanical pruning effects on. 41:273-6.

Seyval blanc. 41:116-20.

ultrafiltration effects on. 41:182-5.

sherry. 41:12-15.

simultaneous yeast/bacterial fermentation. 41:57-67.

sparkling. yeast starters for continuous production. 41:219-22.

stabilization. potassium bitartrate precipitation. 41:16-20. ultrafiltration, 41:207-14.

Sevval blanc. 41:116-20.

tyramine formation. 41:160-7.

ultrafiltration. 41:182-5, 207-14.

urea formation. 41:68-73.

volatile composition. 41:313-18.

White Riesling. 41:207-14.

yeast. See also Yeast(s).

autolysis during Champagne aging. 41:21-8.

# XYZ

Xylem transport. 41:301-5.

Yeast acid proteases for wine haze reduction. 41:147-55.

autolysis during Champagne aging. 41:21-8.

effect on urea formation. 41:68-73.

genomic integration of K1 killer toxin gene. 41:37-42.

ghosts. 41:48-56.

growth during vinification 41:48-56, 156-9.

influence on volatile composition of wines fermented without sulfur dioxide. 41:313-18.

K1/K2 double killer strains. 41:37-42.

lees, effect on ethyl carbamate formation. 41:269-72.

Leuconostoc oenos. See Leuconostoc oenos.

Saccharomyces cerevisiae. See Saccharomyces cerevis-

starters. for sparkling wine production. 41:219-22.

Yield, grapevine. harvesting techniques. 41:176-81.